

GTAGGTTTG GGTGTCGGTG AGATCAGTGT TCGACCGAAA TCCAACGCAT TTTCTAATT
GGATTCAGA AATCTGGGAG AAGGTAGCAG AATGTCGGAT TCATATGATG ATCGAATGAA
AGATCATGAT ATGGACGAAC GAGCCCCGAT TGATCCGGCG CCATTCTCGT TAAGTGTCT
AAAGAAAGCA ATCCCTGCAC ATTGCTTCCG GCGATCCGCC GTCTGGTCAT CCTGCTACGT
AGTTCAAGGAT CTCAATTATCA CCTTCCCTTT ATACACGGTC GCCAACACCT ACATTCTCA
CCTCCCTCCT CCTCTAGTTT ACTTAGCATG GCCGGTTTAC TGGTTTGCC AATCTTGCAT
CCTCACTGGT TTATGGGTCC TCGGCCATGA ATGCGGCCAT CATGCCCTTA GTGAGTACCA
GTGGATTGAT AACGCCGTTG GATTGTCCT CCATTGGCT CTCCCTACCC CTTACTTTT
TTGGAAATAC AGCCATCGAA AGCACCATGC AAACACAAAT TCACATCGAAA ACGAGGAAGT
TTACATTCT AGAACTCAGT CCCAGCTCAG GACTTACTCC ACATACGAAT TTCTTGACAA
CACGCCCTGGT CGAATCCTCA TCTTGGTCAT CATGTTAACCT TAGGATTTC CTTTATACCT
CTTAACGAAT GTTCAGGCA AGAAAGTACGA TAGATTTACC AACCACTTTG ATCCATTGAG
CCCGATCTTC ACCGAGCGTG AGCGAATCCA GGTTGCGTTA TCAGATCTTG GTATCGTTGC
AGTGTTTTAC GGACTCAAGT TTCTTGTACA AACAAAAGGA TTGGTTGGG TGATGTGCAT
GTATGGAGTT CCAGTGATAG GTCTGAATT CTTCATTATC GTAACTCACCT ATCTGCACCA
CACACATCTG TCGTCACCCC ATTACGATTC ACCGAATGG AACTGGATCAAAGGAGCCIT
GACCACAATC GACAGAGATT TCGGTCTCCT GAATCGGGTT TTCCACGACG TTACACACAC
CCACGTGTTG CACCATTTGT TTCCCTACAT TCCACATTAT CATGCAAAGG AGGCAAGCCIA
GGCCATCAAG CCAATCTGG GTGATTACAG GATGATCGAC AGGACTCCAT TTTCAAAGC
AATGTGGAGA GAGGCCAAGG AATGCATTAA CATCGAGCAA GATGCAGACA GCAAGCACAA
AGGGACATAT TGGTACCATAA AAATGTAATC GATGATGGAG TTTAGTTGGAA AATAATGACA
TGCAGCATCC CTTTGTATG CTTGAATCGT TCTATTCTT TATATGTTT GTAAGATAAA
TAAGTAAATC TTGAGTGAAGATGGGGAGC AGGAAACAAG CAGAATATAA TACGCTA AAA
AAAAAAAAAAA AAAAAAAAAA AAAAAAA

Figure 1: cDNA sequence of *Stokesia laevis* epoxygenase (SEQ ID No.1).
The start and the stop codons are underlined

MSDSYDDRMK DHDMDERAPI DPAPFSLSDL KKAIPAHCFR RSAVWSSCYV
VQDLIITFLL YTVANTYIPH LPPPLVYLAW PVYWFCQSCI LTGLWVLGHE
CGHHAFSEYQ WIDNAVGFVL HSALLTPYFS WKYSHRKHHA NTNSLENEEV
YIPRTQSQLR TYSTYEFLDN TPGRILILVI MLTLGFPLYL LTNVSGKKYD
RFTNHFDPLS PIFTERERIQ VALSDLGIVA VFYGLKFLVQ TKGFGWVMCM
YGVPIVGLNS FIIVITYLHH THLSSPHYDS TEWNWIKGAL TTIDRDFGLL
NRVFHDVTHT HVLHHLFPIYI PHYHAKEASE AIKPILGDR MIDRTPFFKA
MWREAKECIY IEQDADSKHK GTYWYHKM

Figure 2 : Peptide sequence of *Stokesia laevis* epoxygenase (SEQ ID No.2).

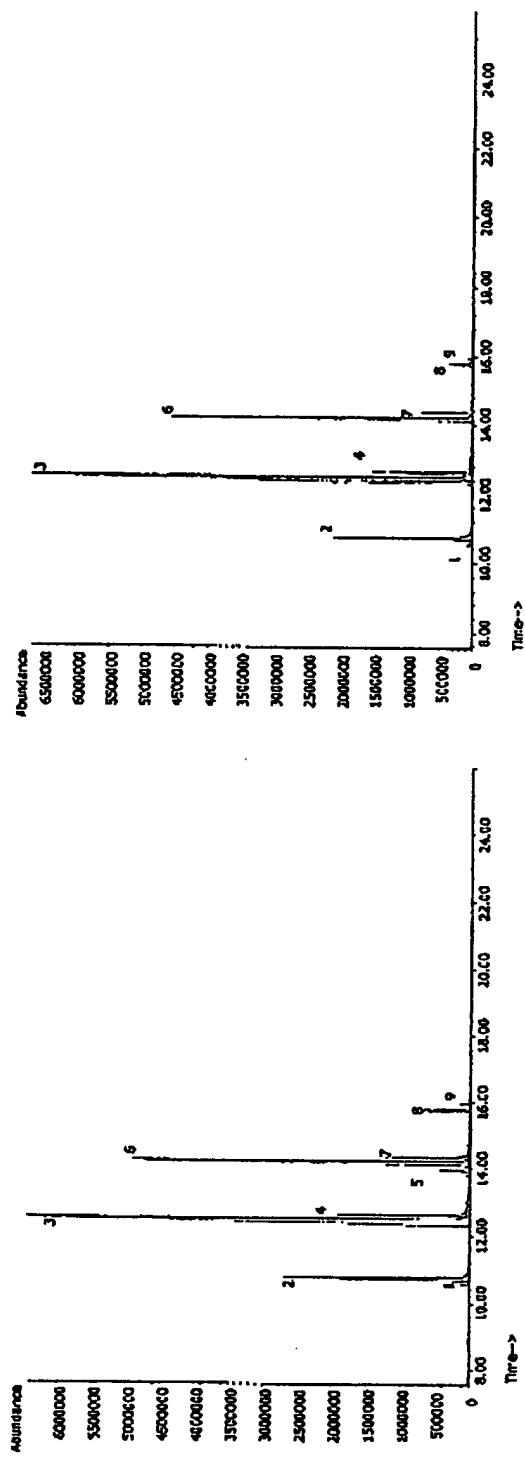
Stokesia	1	50
Vernonia	~~~~~	GTAGGTTTG GGTGTCGGTG AGATCAGTGT
Crepis	TTATGAAAGC TCGATCGGTG TTGATCAAT TCAAATCGAC GAACACGAAA	~~~~~
Stokesia	51	100
Vernonia	TCGACCGAAA TCCAACGCAT TTTCTAATTG GGATTCAGA AATCTGGGAG	~~~~~
Crepis	TCGAACTCAA CAATTCAAAT CTGAAATAT TAATTGGATC AAGCAGGGCGG	~~~~~gagaag
Stokesia	101	150
Vernonia	AAGGTAGCAG AATGTCGGAT TCATATGATG ATC..... GAATG	~~~~~
Crepis	A...TATGAT GATGTCGGAT TCATGTGATG ATCATGATCA GCTGGTGAAA	ttgaccataa atcattttatc aacatgggtg ccggcggtcg tggcggaca
Stokesia	151	200
Vernonia	AAAGATCATG ATATGGACGA ACGAGCCCCG ATTGATCCGG CGCCATTCTC	~~~~~
Crepis	GATGATCATA ATATAAACGA ACGTGCACCG GTTGTGCGG CACCATTCTC	tcggaaaaat cggtcatgga acgtgtctca gttgatccag taaccttctc
Stokesia	201	250
Vernonia	GTAAAGTGAT CTAAAGAAAG CAATCCCTGC ACATTGCTTC CGGCGATCCG	~~~~~
Crepis	GTAAAGCGAT CTAAAGAAAG CAATCCCTCC GCATTGCTTC CAGCGATCTG	actgagtgaa ttgaagcaag caatccctcc ccattgcttc cagagatctg
Stokesia	251	300
Vernonia	CCGTCTGGTC ATCCTGCTAC GTAGTTCAAG ATCTCATTAT CACCTTCCTT	~~~~~
Crepis	CCATCCGTTTC ATCGTGCTAC GTTGTCAAG ATCTCATTAT TACCTTCCTT	taatccgctc atttactat gttgtcaag atctcattat tgcctacatc
Stokesia	301	350
Vernonia	TTATACACGG TCGCCAACAC CTACATTCTC CACCTCCCTC CTCCTCTAGT	~~~~~
Crepis	TTATACACGC TCGCCAACCTC TTACATTCTC CTTCTCCTC CTCCTCTACC	ttctacttcc ttgccaacac atatatccct actttcccta ctatgtctac
Stokesia	351	400
Vernonia	TTACTTAGCA TGGCCGGTTT ACTGGTTTG CCAATCTTGC ATCCTCACTG	~~~~~
Crepis	TTACTTAGCA TGGCCTGTTT ACTGGTTTG CCAATCTTCG ATCCTCACTG	ctacttagct tggcccggtt actgggtctg tcaagcttagc gtcctactg
Stokesia	401	450
Vernonia	GTTTATGGGT CCTCGGCCAT GAATGCGGCC ATCATGCCTT TAGTGAGTAC	~~~~~
Crepis	GTTTATGGGT CATTGGCCAT GAATGTGGCC ATCATGCTTA TAGTGAGTAC	gcttatggat cctcgccac gaatgtggtc accatgcctt tagcaactac
Stokesia	451	500
Vernonia	CAGTGGATTG ATAACGCCGT TGGATTGTC CTCCATTCTGG CTCTCCTCAC	~~~~~
Crepis	CAGTGGGTTG ATAACACCGT TGGATTCTAC CTCCATTCTCT TTCTTCTCAC	acatggtttgc acgacactgt gggcttcatc ctccactcat ttctcctcac
Stokesia	501	550
Vernonia	CCCTTACTTT TCTTGAAAT ACAGCCATCG AAAGCACCAC GCAAACACAA	~~~~~
	ACCTTACTTT TCTTGAAAT ACAGCCATCG AAAGCACCAC GCAAACACGA	

Crepis	cccgtaattc tcttgaaat tcagtcaccg gaatcaccat tccaacacaa	
	551	600
Stokesia	ATTCACTCGA AAACGAGGAA GTTTACATTC CTAGAACTCA GTCCCAGCTC	
Vernonia	ATTCACTCGA AAACGAGGAG GTTTACATTC CTAAAGCCAA GTCCCAGCTC	
Crepis	gttcgattga taacgatgaa gtttacattc cgaaaagcaa gtccaaactc	
	601	650
Stokesia	AGGACTTACT CCACATACGA ATTTCTTGAC AACACGCCCTG GTCGAATCCT	
Vernonia	AGGAATTACT CCAATTTCAA ATTTCTTGAC AACACCCCTG GTCGAATCTT	
Crepis	gcgcgt.... ..atctataa acttcttaac aacccacctg gtcggctgtt	
	651	700
Stokesia	CATCTTGGTC ATCATGTTAA CCTTAGGATT TCCTTTATAC CTCTTAACGA	
Vernonia	CATTTGCTT ATCATGTTGA CCTTGGGCTT TCCTTTATAC CTCTTGACCA	
Crepis	gtttttgatt atcatgttca cccttaggatt tcctttatac ctcttgacaa	
	701	750
Stokesia	ATGTTTCAGG CAAGAAGTAC GATAGATTAA CCAACCACTT TGATCCATTG	
Vernonia	ATATTTCAAGG CAAGAAATAC CAAAGGTTG CCAACCACTT TGATCCGTTG	
Crepis	atatttccgg caagaaatac gacaggtttg ccaaccactt cgaccccatg	
	751	800
Stokesia	AGCCCCGATCT TCACCGAGCG TGAGCGAATC CAGGTTGCGT TATCAGATCT	
Vernonia	AGCCCCATCT TCAGTGAGCG TGAACGAATC CAGGTCGTGC TATCGGATGT	
Crepis	agtccaattt tcaaagaacg tgagcggttt caggtcttcc tttcggatct	
	801	850
Stokesia	TGGTATCGTT GCAGTGTTT ACGGACTCAA GTTTCTTGTA CAAACAAAAG	
Vernonia	GGGTCTCATTT GCTGTGTTT ACGGGCTTAA GTTTCTTGTA GCGAAAAAAAG	
Crepis	tggcttttcc gccgtgtttt atggaattaa agttgctgta gcaaataaaag	
	851	900
Stokesia	GATTGGTTG GGTGATGTGC ATGTATGGAG TTCCAGTGAT AGGTCTGAAT	
Vernonia	GGTTCGGTTG GGTAATGCGC ATGTACGGAG CCCCAGTGGT TGGGCTGAAT	
Crepis	gagctgcttg ggtagcgtgc atgtatggag ttccggattt aggcgtattt	
	901	950
Stokesia	TCCTTCATTA TCGTAATCAC TTATCTGCAC CACACACATC TGTCGTCAACC	
Vernonia	GCCTTCATAA TAATGATCAC TTATCTCCAC CACACCCATC TGCTTCGCC	
Crepis	acctttttcg atgtgatcac cttcttgac cacacccatc agtcgtcgcc	
	951	1000
Stokesia	CCATTACGAT TCAACCGAAT GGAACCTGGAT CAAAGGAGCC TTGACCACAA	
Vernonia	TCATTACGAT TCGACCGAAT GGAACCTGGAT CAAAGGAGCC TTGACTACAA	
Crepis	tcattatgtat tcaactgaat ggaactggat cagaggggccc ttgtcagcaa	
	1001	1050
Stokesia	TCGACAGAGA TTTCGGTCTC CTGAATCGGG TTTTCCACGA CGTTACACAC	
Vernonia	TCGATAGAGA TTTCGGTCTC CTGAATAGGG TGTTCCATGA CGTCACTCAC	
Crepis	tcgataggga ctttggattc ctgaatagtg ttttccatga ttttacacac	
	1051	1100
Stokesia	ACCCACGTGT TGCACCATT GTTTCCCTAC ATTCCACATT ATCATGCAAA	
Vernonia	ACACACGTGT TGCATCATT GTTCCCGTAC ATTCCACATT ATCATGCAAA	

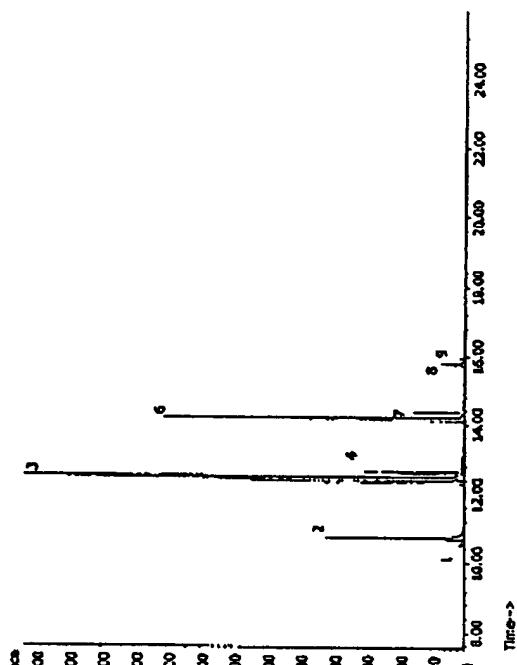
Crepis	actcatgtca tgcattcattt gtttcatac attccacact atcatgcaaa	
	1101	1150
Stokesia	GGAGGCCAAGC GAGGCCATCA AGCCAATCTT GGGTGATTAC AGGATGATCG	
Vernonia	GGAGGCGAGC GACGCAATAA AGCCGGTGTT AGGGGAGTAT CGGATGATCG	
Crepis	ggaggcaagg gatgcaatca agccaatctt gggcgacttt tatatgatcg	
	1151	1200
Stokesia	ACAGGACTCC ATTTTCAAA GCAATGTGGA GAGAGGCCAA GGAATGCATT	
Vernonia	ATAGGACTCC GTTTTACAAA GCAATGTGGA GAGAGGCCAA GGAATGCATC	
Crepis	acaggactcc aattttaaaaa gcaatgtgga gagagggcag ggagtgcatg	
	1201	1250
Stokesia	TACATCGAGC AAGATGCAGA CAGCAAGCAC AAAGGGACAT ATTGGTACCA	
Vernonia	TACATCGAGC CAGATGAAGA TAAGAAGCAC AAAGGTGTAT ATTGGTACCA	
Crepis	tacatcgagc ctgat..... agcaagctc aaaggtgtt attggatca	
	1251	1300
Stokesia	TAAAATGTAA TCGATGATGG AGTTTAGTTG GAAATAATGA CATGCAGCAT	
Vernonia	TAAAATGTGA TACGAGCTGA GTACGTAGTA CGTTGTATGC TTTTGTAAACG	
Crepis	taaattgtga tcatatgcaa aatgcacatg cattttcaaa ccctctagtt	
	1301	1350
Stokesia	CCCTTTGTA TGCTTGAAATC GTTCTATTTC TTTATATGTT TTGTAAGATA	
Vernonia	TTTTGTAAAGA TAAATAAAATA AATCTTGAAT GAAGATAAAA AAAAAAAA	
Crepis	acgtttgttc tatgtataat aaaccgcgg tcctttgggt gactatgcct	
	1351	1400
Stokesia	AATAAGTAAA TCTTGAGTG AAGATGGGA GCAGGAAACA AGCAGAATAT	
Vernonia	AAAAAAA~ AAAAAAA~ ~~~~~ ~~~~~ ~~~~~ ~~~~~	
Crepis	aagccaggcg aaacagttaa ataatatcggtatgtgt aatgaaagta	
	1401	1450
Stokesia	AATACGCTAA AAAAAAAA AAAAAAAA AAAAAAAA~ ~~~~~	
Vernonia	~~~~~ ~~~~~ ~~~~~ ~~~~~ ~~~~~ ~~~~~	
Crepis	tgtggttgtc tggttttgtt gctatgaaag aaagtatgtg gttgtcggc	

Figure 3

A



B



C

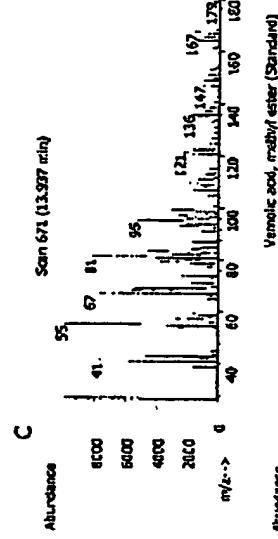
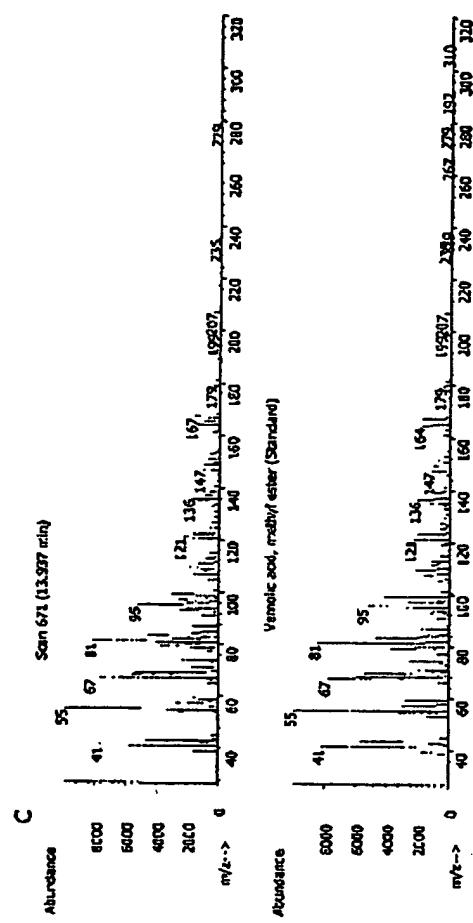


FIGURE 4

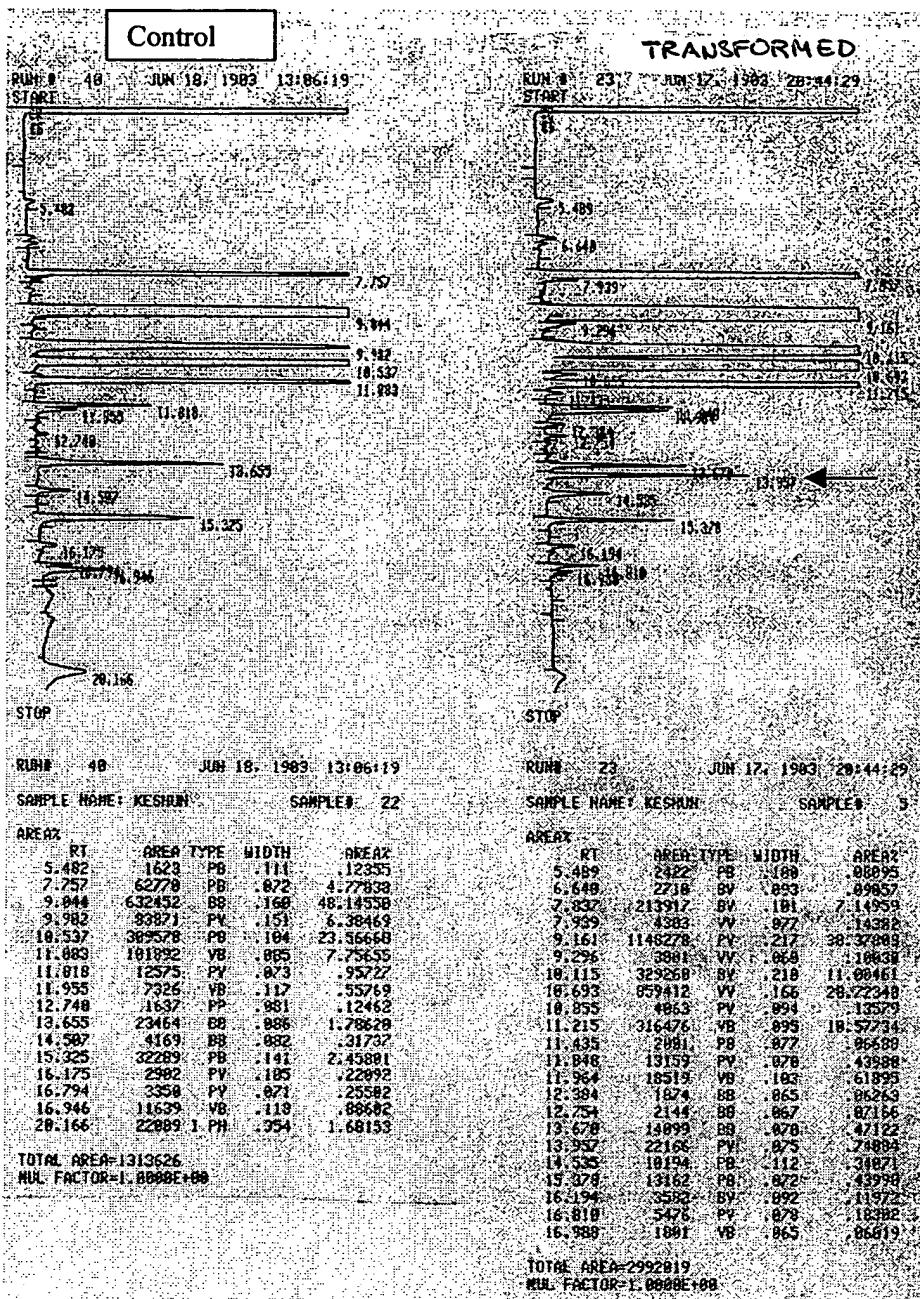


Figure 5